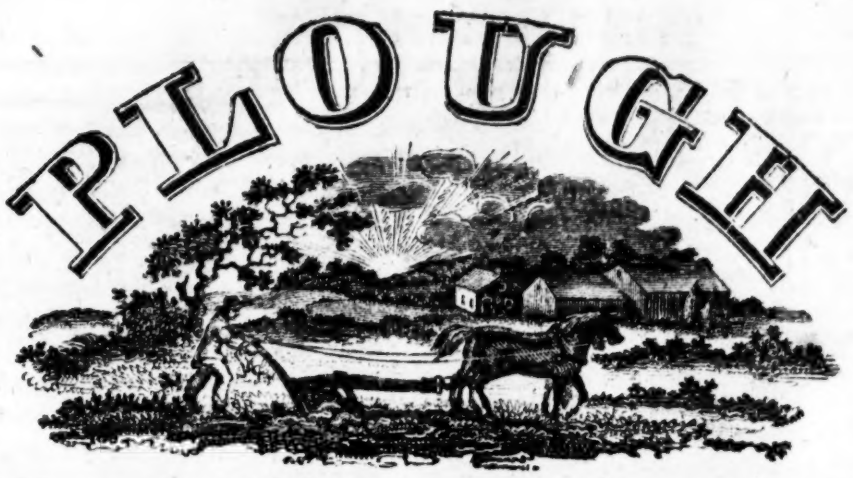
THE PLOUGH BOY.



AND JOURNAL OF THE BOARD OF AGRICULTURE.

BY SOLOMON SOUTHWICK.

"He that observeth the wind shall not sow; and he that regardeth the clouds shall not reap."—BUT—"He that tilleth his land shall have plenty of bread."—*Ecclesiastes.*

Vol. I. *ALBANY: SATURDAY, MARCH 25, 1820.* No. 43.

ORIGINAL.

FOR THE PLOUGH BOY.

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EXTRACTS FROM THE TRANSACTIONS OF THE

Troy Lyceum of Natural History.

No. V.

—

OBSERVATIONS

ON THE GEOLOGY OF THE SOUTHERN PART OF INDIANA.—BY ISAAC M'CONIHE, ESQ.

My route was nearly through the centre of the population of Indiana, though far south of the centre of the territory. It is the general understanding in the eastern states, that all the western part of the United States is of an even surface. Such at least was my impression, when I set out to journey to the west. Such is very generally the fact throughout much of the vast valley of the Missisippi. But the part of Indiana through which I travelled is as hilly as some parts of New-England, though the hills have mostly rounded summits, and are denominated knobs by the inhabitants.

This is evidently a secondary country; though transition rocks often appear. In fact, evidences occur at irregular intervals, sufficient to lead the mind to the conclusion that the whole country is underlaid at no great depth, with a continuation of the transition rocks which predominate in the vicinity of Hudson's river in the state of New-York. I found one locality of well characterised argillite at the bottom of a creek. This was among that range of hills, which commences at New-Albany, about six miles from the Ohio, and continues 50 or 60 miles. Along the eastern edge of this range of hills, the red sandstone prevails, often of that hard slaty variety, common in Catskill mountains. Detached masses of gray-wacke frequently occur here also. Whenever these transition rocks appear, the circumstances attending them and their geological connexions clearly indicate that they are left in view, by the disintegration of the secondary rocks, which had once overlayed them.

Vast horizontal layers of secondary lime-stone are extended over most of this state, which abound in organic relics. These relics are most abundant, however, in some particular localities. In what is called the Barrens of Washington county, *Madriporites* of the horn-shaped variety appear in thousands. *Pectenites*, *Anomites*, and *Terebratulites* are found in every place, where there is compact limestone.

About 50 miles from the Falls of the Ohio there is a locality of remakably compact, fine-grained variegated limestone. Alternating with its layers I found large quantities of the true white lithographic stone; now becoming a very important mineral, since Dr. Samuel Brown, of Alabama, introduced the lithographic art into this country. I have deposited small specimens of it in the Troy Lyceum.

Near this place workmen were engaged in digging a well. I took specimens from the fragments of two rocks, which seemed to be in place about 30 and 35 feet below the surface, and merely noted down their relative positions and locality. On examining them since, I find the lower rock to be gypsum, overlaid with secondary calcareous sandstone.

The lime rocks of this state are remarkably cavernous. There are several pretty large streams of water, which disappear for miles through the vast fissures and cavities in these rocks. There is one, whose return to open day has not yet been discovered.

In the alluvion I found well characterized fragments of agate. Also chalcedony, semi-opal and fine sinople jasper.

THE PUBLISHING COMMITTEE.

FOR THE PLOUGH BOY.

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Mr. SOUTHWICK,

I embrace the earliest opportunity of expressing my approbation of your very laudable endeavours to introduce to the public the authors of our own country. It is a mortifying circumstance to those who feel the pride of a patriot, that British writers should be so generally preferred to those of the same class in our own country; and while this prejudice continues it is certain there is small encouragement for Americans to become authors. I have had the pleasure of reading only one of the works you mention, namely, Mr. THOMAS' travels in the west, which I consider a highly meritorious production. The language is brief, elevated, and comprehensive, with much originality of thought.

On several occasions he has indulged in speculation, but in the widest ranges of his fancy he has generally furnished the reader with at least a few interesting facts. To one instance of this kind particularly, I would beg leave to refer you. At page 7, he has shewn that "detached parts of every rocky stratum which is uncovered for 50 miles on the south side of Lake Ontario, are scattered to the south of these ranges, and that seldom, if ever, have such fragments been found to the north." The facts which he has collected to prove this position, and which I believe have been overlooked by the former scientific explorers of our country, present a most interesting view of the *alluvial formation.* I trust the Geologist hereafter will not think it unworthy of his close examination, as it is from the arrangement of loose matter that the currents which have swept our globe are chiefly to be determined.

I have been directed to this passage by a remark of Mr. EATON, in the 36th number of your excellent paper, who I presume was ignorant of

the researches of Mr. T. The paragraph to which I refer contains this remark :—" An accurate comparison of specimens might aid in tra cing these blocks back to their parent strata, and eventually lead to many interesting reflections."

C.

Ontario County, Feb. 18, 1820.

TO THE EDITOR OF THE PLOUGH BOY.

SIR,

As no individual in our country has manifested a more patriotic zeal, than yourself, to bring forward and support deserving American publications ; I doubt not that you will be willing to fill some vacant corner of your paper with the enclosed observations. P.

THE BRIEF REMARKER.—*By Ezra Sampson.*

In answer to the question whether there now is any thing thought or said, which has not been thought and said before, it may be remarked, that perhaps the ideas we now have are much the same as others would have had, if they had been in our situation. But new combinations of circumstances elicit new arrangements of thought. The eagle of America is a bird of no common plumage. History affords no parallel to our situation ; aud if, on the one hand, we have advantages and prospects, which no other people have possessed ; so on the other, from our institutions and state of society, we are liable to mistakes and errors peculiar to ourselves. Thus situated, what are the books by which we are most likely to be benefited ? Certainly those written by authors, who have studied with judgment and attention the peculiar circumstances of our case, whose mental vision, while it has been extended by the light of science, to comprehend great things at a distance, has yet tenaciously preserved its faculty of discerning the minute objects in its own vicinity ;—and such is Mr. SAMPSON.

This book reminds me of one of the best dinners of a wealthy farmer. The table presents nothing for show but much for use ; the fare is substantial but not coarse ; calculated to make strong and cheerful for future toils ; while unaffected pleasantry presiding at the board, gives a present zest to the entertainment.

If I knew the worth of this volume, and was without it I would sell the Rambler, the Adventurer or even the Spectator to buy it, not but that these are valuable books. They are the prescriptions of skillful physicians, but they are fitted to other men's cases ; whereas the *Brief Remarker* treats judiciously of our own.

PORTIA.

FOR THE PLOUGH BOY.

On Animal Food.

The preparation of the various animals designed for the subservience of our wants, in the article of food, is worthy of particular notice.—Many articles of food, well calculated to nourish and fatten animals, are nevertheless not well adapted for giving an agreeable flavour to the flesh. The flesh of Neat Cattle, when fatted principally on oil cake, partakes of the taste of that sort of food ; and for this reason the feeding of this ingredient should be discontinued, for some days, for the purpose of affording other aliment to the ttle more properly calculated to finish their fatting, in order that their flesh resume its natural taste. Let any sort of graminivorous animal be plentifully fed on what is commonly called *garlic*, or *wild onion*, (a weed that abounds plentifully in many parts of this country,) and then immediately killed, and its flesh will be so strongly tasted of this food that it will be unfit to eat ; but let the same animal be kept for ten or twelve hours from this food, before it is killed, and its flesh will be totally divested of the garlic taste. Wild pigeons are often taken in nets, and if immediately killed their flesh is dark coloured, and of a peculiar taste ; but let them be kept a while on wheat, or Indian corn, and their flesh will be found nearly as white as that of dunghill fowls, and differently and better tasted than before.—Swine, of good sorts, may be sufficiently fatted on squashes, pumpkins, ruta baga &c. but in order to render the flesh more solid, and perhaps somewhat better tasted, it is advisable that their principal food, for about the last ten days, be ground Indian corn, or some other ground grain equally nutricious. The flesh of such wild water fouls as feed mostly on fish &c. has a fishy taste ; but if they can be kept a while on grain the taste of their flesh will be improved. The common squirrel found in wild lands is always black, but when such lands are brought under cultivation the colour of this animal is for the most part changed into grey : This no doubt is owing to a change of food ; but whether this change improves the taste of the flesh of the animal I have never understood.

We reject the flesh of many sorts of animals as an article of food, and in many instances no doubt merely from prejudice. One instance shall be here mentioned. The flesh of what is commonly called the *Guinea fowl* is generally supposed, particularly in the northern states, to be unsavoury. I first ate of this fowl in one of the southern states, and can safely say that I never found the flesh of any fowl better tasted.

The flesh of well fatted swine is found to be the most strengthening and nourishing ; good beef, mutton &c. the next ; the flesh of fowls ranks in the third degree, and that of fish in the fourth. Those whose daily employments are the most laborious require the most animal food, and such as is most strengthening ; but, generally speaking, it is believed that even their diet should never exceed a proportion of about one part of good animal food to four or five of vegetable, together with milk &c. and that those whose employments are not fatiguing do not require more than one half of this proportion of animal food. The food of a great proportion of the peasantry of Ireland is almost entirely milk and potatoes ; and yet we find no people more healthy, better formed, or possessing more quick and ardent powers of mind ; while on the contrary such savage nations as, for want of other food, subsist almost entirely on fish, exhibit an appearance and character usually the reverse.

J. N.

Wooden-soled Shoes.

Mr. Custis, of Arlington, Va. has brought into use, among the labourers of his plantation, shoes of the above description. He says that those by whom they are worn, declare them to be much warmer, and more comfortable, than shoes with leather soles. They keep the feet perfectly dry, and are therefore much more conducive to health. Mr. C. says the introduction of this improvement has lessened his expenditures for keeping the labouring part of his family in shoes, at least four-fifths—that in this way every man can be his own shoe-maker, and can make half a dozen pairs in a day. The upper leather of the shoes is sewed together in the usual manner. The soles are made in the usual shape of soles, with the heel about three-fourths of an inch thick, and a groove is cut into the upper parts of the edges, sufficiently wide and deep, to nail on the leather, which is done with little tacks drove so closely together as to exclude the entrance of any water. During the winter it is advisable to fasten little plates of iron round the heel, and fore part of the shoe, with nails somewhat projecting, so as to prevent slipping ; or the nails may be drove into the wood for that purpose. The harder the wood of which the soles are made, the longer they will last. It would doubtless be an improvement to have the upper side of the soles scooped out a little, so as better to suit the shape of the foot.

A shoe somewhat similar to this has long been in use among the peasantry of France ; and there can be no doubt that for those whose labors expose them to the inclemency of the seasons, this is much the healthiest and cheapest sort of shoes.

J. N

FOR THE PLOUGH BOY.

TO Mr. DAVID THOMAS,

President of Cayuga county Agricultural Society.

DEAR SIR,

Are you certain that *Chess* is really a species of grain, capable of producing a plant ? I have been much puzzled to make up my mind on the subject. I have taken a quart of chess and sowed it on a bed well prepared—*not a sprout was produced.* I have seen a large field well prepared, well manured, and 70 bushels of good clean wheat sowed thereon—*a most luxuriant crop of chess was produced, but no wheat ; no, not one bushel to twenty acres.*

I have had the pleasure of your acquaintance in years past ; no man has a higher respect for your opinion, or a higher value for your agricultural researches than myself—and yet I doubt. Nature is mysterious in many of her operations. May not a grain of wheat, from some disorder in the soil, climate, or some other accidental cause not yet explained, result in producing a luxuriant spear of chess ? It certainly is, from some unexplained cause, capable of producing a head of smut : here then, is a *lusus naturæ*, quite as wide from the common course as that wheat should produce chess. I have long been of opinion that chess and smut were produced by some outward cause not within the power of human foresight to prevent, and had almost made up my mind that it was possible that wheat being disordered, the plantula sickened by some accidental cause, might possibly become incapable of circulating the proper juices and depositing the proper ingredients

in the seed which go together to form wheat; and a defect of these constituents might form smut or chess: both of which I think, like the mule, are incapable of producing their like.—In the human economy we see rickety children, distorted by some strange derangement of the humours—the shoulders project over the head—the head and breast unnaturally enlarged—man is thus converted into a monster. The spur in rye is another instance, and many might be quoted.

Your appeal to the Philadelphia farmer, on the subject of *chess* in wheat I cannot think proves any thing. I have known a number of crops of the very best wheat to be raised from the same land—four crops in about 10 years, from the same field and all good. Yet on the same land and with the best of preparation and the best of seed, little else but mere chess was raised last year on part of the field. I have been puzzled to account for this. Three years ago I saw a beautiful field of wheat on this land; and last August as beautiful a crop of chess. *Yet no chess was sown thereon.* I mention these facts merely with a view to prompt enquiry. The subject is certainly interesting to farmers. If any human prudence can prevent *chess* and *smut* from usurping the place of wheat in our fields, to the disappointment of our hopes, it is very important that it should be known. You cannot render a more valuable or acceptable service to your country, and to us farmers, than in pointing out the means of preventing these disorders in our crops; and I have great confidence in your zeal and capacity to throw light on the subject. I fear, however that the evils are of a nature not to be prevented by human prudence and industry. Yet these may do much; and we should not be discouraged in our endeavors to promote so important an object. Agriculture is a great and important subject for the investigation and exercise of the talents of the chemist and philosopher. Let us not draw hasty conclusions, however, from partial and half examined facts—the economy of nature, in her vegetable as well as animal productions, requires patient and persevering examination before we attempt to decide, or lay down rules for her. I am still of opinion that good wheat may produce smut or chess; that good seed rye may produce *spur*; and good flax seed may degenerate into flax chess; all the brine and all the human arts of industry to the contrary notwithstanding.

The subject, however, is very important, and worthy of your investigation; and none would be better pleased to have it elucidated than your humble servant. AGRICOLA.

Ontario, March, 1820.

FOR THE PLOUGH BOY.

MR. EDITOR,

Since reading the "*Farmer's Assistant*," there is not the least doubt but by the single article in which he prescribes the manner of raising lambs I have saved more than double the price of the book every year, by pursuing his directions.—The mode prescribed is, to give the lamb the first day or two a small quantity of cow's milk warm three or four times in the day: if it is cold weather the cup containing the milk should stand in another vessel that is partly filled with warm water. Should the lamb be chilled, rub his legs with tow or any other combustible that will answer the purpose of drying it and setting the blood to circulate: in an extreme case let a warm cloth be wrapped round it leaving the head out, that the ewe may be able to perform her duty.—By giving a small quantity of potatoes, or turnips, with a little corn or oats, the milk of the ewe will be encreased, and the owner richly rewarded.

The above-mentioned book ought to be in the hand of every farmer.

A FARMER OF ORANGE COUNTY.

Board of Agriculture.

WETTERAVIAN GRAIN.

To the President of the Board of Agriculture.

NEW-YORK, *Feb.* 29, 1820.

Sir—At the instance of my friend, Mr. George Arcularius, of this city, I sent to Wetteravia in Germany, for a quantity of seed grain, to be distributed in different parts of the United States.

Through the munificence of this gentleman, who has already introduced some excellent varieties of German fruit trees, I am now enabled to offer to several Agricultural societies and individuals, samples of the *red Wheat*, *Rye*, and *Barley of Wetteravia*.

This *Wetteravian grain* is "free from insects—very productive—weighs upwards of sixty pounds per bushel—yields a great proportion of flour—the flour is of a fine flavor—very white (that of the rye is whiter than American)—bakes well—may be preserved for a long time without liability to deterioration."

The barley may be sown as soon as the soil can be prepared for it. The wheat and rye are winter grains, though Mr. A. recommends that of each parcel a small quantity be sown in the spring. In Wetteravia it is put into the ground, during the months of October, November, and if the weather permits as late as December.

This seed is as good as the last season afforded, for, in the most favorable seasons, the size is larger. Though it was put up with great care, still, however, before its arrival, it has been accidentally exposed to a certain degree of moisture, which has injured the appearance, but not the quality. Besides as the German farmers are not generally in the habit of cleaning their grain thoroughly before it goes to mill, it being a branch of the miller's business to separate the refuse when requisite, the sample herewith presented, should be minutely examined before sowing, in order to select the fullest and largest grains.

Very respectfully,

F. C. SCHÆFFER.

Hoven Cattle.

To the President of the Board of Agriculture of the state of New-York.

SIR,

Excuse me for troubling you with a short account of what I esteem to be the best method of relieving *Hoven Cattle*. That very many cattle, from various causes, become bloated, or hoven, and die, is very notorious. And it is with a desire to make the public acquainted with a general and effectual method of relief for all cattle in this situation, (which, from twenty years' experience, I have found to be much more safe and sure, than any I have ever met with, either in Agricultural books, newspapers, or elsewhere) —that I, through you, present to the Board of Agriculture this account; hoping that if you deem it of sufficient importance and utility to warrant it, you will put it in a way to come before the public. MARTIN E. WINCHELL.

North East, Dutchess county, N. Y.

A description of the circumstances and causes of Cattle becoming hoven, or swollen; and a sure method of relief.

The circumstances and causes of cattle becoming hoven are various; but it is generally occasioned by their eating with greediness fresh clover, or other grass, in the morning, when wet with dew, or rain; and this more especially takes place when they have been sometime without eating. The reason is obvious: the cold, condensed air and water that accompanies the grass into the grand receptacle, the paunch, soon rarifies and expands by the heat of the animal; and crowds the crude mass that is in the pounch, so that it obstructs the entrance into, and the passage out of the same; and thus prevents the escape of the rarified air which continues to expand till the creature dies. Cattle also frequently become bloated by eating large quantities of potatoes, or grain, or other substances; in all which cases, the difficulty lies in the paunch, and requires immediate relief.

Relief.—Cattle may sometimes be relieved by by pulling out, some distance, the tongue; or by forcing down salt; or by running down the throat a pliable tube into the paunch, through which the rarified air escapes. In some instances, a sharp pointed knife is thrust into the soft part of the creature between the hip and short ribs. The above methods of operation may, indeed, in some cases, afford relief. But the most sure and safe relief, is to make a hole in the left side of the creature, by thrusting into the paunch a sharp pointed knife, or other sharp instrument, an inch and a quarter wide, between the last long and the first short ribs with the back of the knife as low as the end of the short rib, the edge towards the spine (or back bone.) and the point towards the centre of the paunch. In this place it will be found on examination, that the paunch adheres to the flesh and ribs of the creature, between the kidney and melt, to the distance of 4 or 6 inches, according to the size of the animal. In this place, therefore, there is no danger of cutting either the melt, kidney, or entrails, or of letting any of the contents of the paunch into the trunk of the body—and the operation may be performed in a moment of time, and with entire safety to the animal.

MARTIN E. WINCHILL,

[*Here follow the certificates of Luther Holley, Esq. of Salisbury, Con. Capt. Simeon Aldrich, Mr. Sturges Bulkley, and Capt. Samuel Russel, of North East, N. Y. testifying from personal observation to the efficacy of the above method.*]

SELECTIONS.

Agricultural Chemistry,

No. XXXII.

BY HUMPHREY DAVY.

WHETHER PLANTS HAVE SENSATION.

Dr. Thomson, in his System of Chemistry, has stated a fact which he considers as demonstrating the irritability of living vegetable systems. When a stalk of spurge (Euphorbia peplis) is separated by two incisions from its leaves and roots, the milky fluid flows through both sections. Now, says the ingenious author, it is impossible that this could happen without
[218] the living action of the vessels, for they cannot have been more than full; and their diameter is so small, that if it were to continue unaltered, the capillary attraction would be more than sufficient to contain their contents, and consequently not a drop would flow out. Since, therefore, the liquid escapes, it must be driven out by a force different from a common physical force.

To this reasoning it may be answered, that the sides of all the vessels are soft, and capable of collapsing by gravitation, as veins do in animal systems long after they have lost all their vitality; which is an effect totally different from vital or irritable action; and the phenomenon may be compared to that of puncturing a vessel of elastic gum filled with fluid, both above and below; the fluid will make its way through the apertures, though in much larger quantity from the lowest, which I have found is likewise the case with the spurge.

Dr. Barton has stated, that plants grow more vigorously in water in which a little camphor has been infused. This has been brought forward as a fact in favour of the irritability of the vegetable tubular system. It is said that camphor can only be conceived to act as a stimulus, by increasing the living powers of the vessels, and causing them to contract with more energy. But this kind of speculation is very unsatisfactory. Camphor, we know, has a disagreeable pungent taste, and powerful smell; but physicians are far from being agreed whether it is a stimulant or sedative, even in its operation upon the human body. We should have no right whatever, even supposing the irritability of vegetables proved, to conclude,
[219] that because camphor assisted the growth of plants, it acted on their living powers; and it is not right to infer the existence of a property proved in no other way, from the operation of uncertain qualities.

That camphor may assist the growth of plants it is easy to conceive; and why should we not consider its efficacy as similar to the efficacy of saccharine and mucilaginous matter, and particularly of oils, to which it is nearly allied in composition; and which afford food to the plant, and not stimulus; which are materials of assimilation, and not of excitement?

The arguments in favour of a contraction similar to muscular action have not then much weight; and besides, there are direct facts which render the opinion highly improbable.

When a single branch of a vine or other tree is introduced in winter into a hot-house, the trunk and the other branches remaining exposed to the cold atmosphere, the sap will soon begin to move towards the buds in the heated branch; these buds will gradually unfold themselves and begin to transpire; and at length open into leaves. Now if any peculiar contractions of the sap vessels or cells were necessary for the ascent of the sap in the vessels, it is not possible that the application of heat to a single branch should occasion irritable action to take place in a trunk many feet removed from it, or in roots fixed in the cold soil: but allowing that the energy of heat raises the fluid merely by diminishing its gravity, increasing the facility of capillary action, and by producing an expansion of the fibres
[220] of the silver grain, the phenomenon is in perfect unison with the views advanced in the preceding part of this Lecture.

The ilex, or evergreen oak, preserves its leaves through the winter, even when grafted upon the common oak; and in consequence of the operation of the leaves there is a certain motion of the sap from the oak towards the ilex, which, as in the last case, seems to be inconsistent with the theory of irritable action.

It is impossible to peruse any considerable part of the Vegetable Statics of Hales, without receiving a deep impression of the dependence of the motion of the sap upon common physical agencies. In the same tree this sagacious person observed, that in a cold cloudy morning, when no sap ascended, a sudden change was produced by a gleam of sunshine, of half an hour; and a vigorous motion of the fluid. The alteration of the wind, from south to the north, immediately checked the effect. On the coming on of a cold afternoon, after a hot day, the sap that had been rising began to fall. A warm shower and a sleet storm produced opposite effects.

Many of his observations likewise shew, that the different powers which act on the adult tree, produce different effects at different seasons.

Thus in the early spring, before the buds expand, the variations of the temperature, and changes of the state of the atmosphere with regard to moisture and dryness, exert their great effects upon the expansions and contractions of the vessels; and then the tree is in what is called by gardeners its bleeding season.

[221] When the leaves are fully expanded, the great determination of the sap is to these new organs. And hence a tree which emits sap copiously from a wound whilst the buds are opening, will no longer emit it in summer when the leaves are perfect; but in the variable weather, towards the end of autumn, when the leaves are falling, it will again possess the power of bleeding in a very slight degree in the warmest days; but at no other times.

In all these circumstances there is nothing analogous to the irritable action of animal systems.

In animal systems the heart and arteries are in constant pulsation. Their functions are unceasingly performed in all climates, and in all seasons; in winter, as well as in spring; upon the arctic snows, and under the tropical suns. They neither cease in the periodical nocturnal sleep, common to most animals; nor in the long sleep of winter, peculiar to a few species. The power is connected with animation, is limited to beings possessing the means of voluntary locomotion; it coexists with the first appearance of vitality; it disappears only with the last spark of life.

Vegetables may be truly said to be living systems, in this sense, that they possess the means of converting the elements of common matter into organized structures, both by assimilation and reproduction; but we must not suffer ourselves to be deluded by the very extensive application of the word *life*, to conceive in the life of plants, any power similar to that producing the life of animals. In calling forth the vegetable functions, common physical agents alone seem to operate;
[222] but in the animal system these agents are made subservient to a superior principle. To give the argument in plainer language, there are few philosophers who would be inclined to assert the existence of any thing above common matter, any thing immaterial in the vegetable economy.—Such a doctrine is worthy only of a poetic form. The imagination may easily give Dryads to our trees, and Sylphs to our flowers; but neither Dryads nor Sylphs can be admitted in vegetable physiology; and for reasons nearly as strong, irritability and animation ought to be excluded.

GRAFTED PLANTS, THE CAUSE OF THEIR DECAY.

As the operation of the different physical agents upon the sap vessels of plants ceases, and fluid becomes quiescent, the materials dissolved in it by heat, are deposited upon the sides of the tubes now considerably diminished in their diameter; and in consequence of this deposition, a nutritive matter is provided for the first wants of the plant in early spring, to assist the opening of the buds, and their expansion, when the motion, from the want of leaves, is as yet feeble.

This beautiful principle in the vegetable economy was first pointed out by Dr. Darwin; and Mr. Knight has given a number of experimental elucidations of it.

Mr. Knight made numerous incisions into the alburnum of the sycamore and the birch, at different heights; and in examining the sap that flowed from them, he found it more sweet and mucilaginous in proportion as the aperture from which it
[223] flowed was elevated; which he could ascribe to no other cause than to its having dissolved sugar and mucilage, which had been stored up through the winter.

He examined the alburnum in different poles of oak in the same forest; of which some had been felled in winter, and others in summer; and he always found most soluble matter in the wood felled in winter, and its specific gravity was likewise greater.

In all perennial trees this circumstance takes place; and likewise in grasses and shrubs. The joints of the perennial grasses contain more saccharine and mucilaginous matter in winter than a any other season; and this is the reason why the fiorin or Agrostis alba, which abounds in these joints, affords so useful a winter food.

The roots of shrubs contain the largest quantity of nourishing matter in the depth of winter; and the bulb in all plants possessing it, is the receptacle in which nourishment is hoarded up during winter.

In annual plants the sap seems to be fully exhausted of all its nutritive matter by the production of flowers and seeds; and no system exists by which it can be preserved.

When perennial grasses are cropped very close by feeding cattle late in autumn, it has been often observed by farmers, that they never rise vigorously in the spring; and this is owing to the removal of that part of the stalk which would have afforded them concrete sap, their first nourishment.

Ship builders prefer for their purposes that kind of oak timber afforded by trees that have had their bark stripped off in
[224] spring, and which have been cut in the autumn or winter following. The reason of the superiority of this timber is, that the concrete sap is expended in the spring in the sprouting of the leaf; and the circulation being destroyed, it is not formed anew; and the wood having its pores free from saccharine matter, is less liable to undergo fermentation from the action of moisture and air.

In perennial trees a new alburnum, and consequently a new system of vessels, is annually produced, and the nutriment for the next year deposited in them; so that the new buds, like the plume of the seed, are supplied with a reservoir of matter essential to their first developement.

The old alburnum is gradually converted into heart-wood, and being constantly pressed upon by the expansive force of the new fibres, becomes harder, denser, and at length loses altogether its vascular structure; and in a certain time obeys the common laws of dead matter, decays, decomposes, and is converted into æriform and carbonic elements; into those principles from which it was originally formed.

The decay of the heart-wood seems to constitute the great limit to the age and size of trees. And in young branches from old trees, it is much more liable to decompose than in similar branches from seedlings. This is likewise the case with grafts. The graft is only nourished by the sap of the tree to which it is transferred; its properties are not changed by it; the leaves, blossoms, and fruits, are of the same kind as if it had vegetated upon its parent stock. The only advantage to
[225] be gained in this way, is the affording to a graft from an old tree a more plentiful and healthy food than it could have procured in its natural state; it is rendered for a time more vigorous, and produces fairer blossoms and richer fruits. But it partakes not merely of the obvious properties, but likewise of the infirmities and dispositions to old age and decay, of the tree whence it sprung.

This seems to be distinctly shewn by the observations and experiments of Mr. Knight. He has, in a number of instances, transferred the young scions and healthy shoots from old esteemed fruit-bearing trees to young seedlings. They flourished for two or three years; but they soon became diseased and sickly like their parent trees.

It is from this cause that so many of the apples formerly celebrated for their taste and their uses in the manufacture of cider are gradually deteriorating, and many will soon disappear. The golden pippin, the red streak, and the moil, so excellent in the beginning of the last century, are now in the extremest stage of their decay; and however carefully they are ingrafted, they merely tend to multiply a sickly and exhausted variety.

ON THE LONGEVITY AND DURABILITY OF PLANTS.

The trees possessing the firmest and the least porous heart-wood are the longest in duration.

In general the quantity of charcoal afforded by woods, offers a tolerable accurate indication of their durability: those most abundant in charcoal and earthy matter are most permanent; and those that contain the largest proportion of gaseous elements are the most destructible.

[226] Amongst our own trees, the chesnut and the oak are pre-eminent as to durability; and the chesnut affords rather more carbonaceous matter than the oak.

In old Gothic buildings these woods have been sometimes mistaken one for the other; but they may be easily known by this circumstance, that the pores in the alburnum of the oak are much larger and more thickly set, and are easily distinguished; whilst the pores in the chesnut require glasses to be seen distinctly.

In consequence of the slow decay of the heart-wood of the oak and the chesnut, these trees under favourable circumstances attain an age which cannot be much short of a 1000 years.

The beech, the ash, and the sycamore, most likely never live half as long. The duration of the apple tree is not probably much more than 200 years, but the pear tree, according to Mr. Knight, lives through double this period; most of our best apples are supposed to have been introduced into Britain by a fruiterer of Henry the Eighth, and they are now in a state of old age.

The oak and chesnut decay much sooner in a moist situation, than in a dry and sandy soil; and their timber is less firm. The sap vessels in such cases are more expanded, though less nourishing matter is carried into them; and the general texture of the formations of wood necessarily less firm. Such wood splits more easily, and is more liable to be affected by variations in the state of the atmosphere.

[227] The same trees, in general, are much longer lived in the northern than in the southern climates. The reason seems to be, that all fermentation and decomposition are checked by cold; and at very low temperatures both animal and vegetable matters altogether resist putrefaction; and in the northern winter, not only vegetable life, but likewise vegetable decay must be at a stand.

The antiputrescent quality of cold climates is fully illustrated in the instances of the rhinoceros and mammoth lately found in Siberia, entire beneath the frozen soil, in which they must probably have existed from the time of the deluge. I examined a part of the skin of the mammoth, sent to this country, on which there was some coarse hair; it had all the chemical characters of recently dried skin.

Trees that grow in situations much exposed to winds, have harder and firmer wood than such as are considerably sheltered. The dense sap is determined by the agitation of the smaller branches to the trunk and large branches; where the new alburnum formed is consequently thick and firm. Such trees abound in the crooked limbs fitted for forming knee-timber, which is necessary for joining the decks and sides of ships. The gales in elevated situations gradually act, so as to give the tree the form best calculated to resist their effects. And the mountain oak rises robust and sturdy; fixen firmly in the soil, and able to oppose the full force of the tempest.

AN ESSAY

On the Management of Bees,

With an account of some curious facts in their History.—By Dr. James Howison, *of Hillend.*

From the transactions of the Caledonian Horticultural Society.

No. II.

Of Swarming.—For several years past, my hives have uniformly sent forth their first swarms during the second week in July, from which it appears, that early or late swarming *in the same situations*, is not so much regulated by good or bad seasons as might have been expected. Near the sea, this will, of course, take place some weeks earlier.

The first swarming is so long preceded by the appearance of drones, and hanging out of working bees, that if the time of their leaving the hive is not observed, it must be owing to want of care. The signs of the second are however more equivocal, the most certain being that of the queen, a day or two before swarming, at intervals of a few minutes, giving out a sound a good deal resembling that of a cricket. It frequently happens, that the swarm will leave the old hive and return again several times, which is always owing to the queen not having accompanied them, or from having dropt on the ground, being too young to fly to a distance. In such cases I have seen her found near the old hive, and on being taken up and placed in the new one, the swarm instantly settled.

Gooseberry or currant bushes should be planted at a short distance from the hives, for the bees to swarm upon, as by attending to this, I have not lost a swarm by straying for several years. This I am however convinced, depends much on the nature of the bees which form the stock. When a hive yields more than two swarms, these should uniformly be joined to others that are weak, as from the lateness of the season, and deficiency in number, they will otherwise perish. This junction is easily formed, by inverting at night, the hive in which they are, and placing over it the one you intend them to enter. They soon ascend, and apparently with no opposition from the former possessors, as I have never observed fighting to be a consequence.

It being very universally believed, that two queens cannot live together in the same hive, I have for several days after this forced junction, searched for the murdered queen, but never with success. Should the weather, for some days after swarming, be unfavorable for the bees going out, they must be fed with care until it clears up, otherwise the young swarm will run a great risk of dying.

Method of obtaining the Honey without killing the Bees.—The Society will see, from the peculiar structure of the hive, with which I accomplish this object, that I was under the necessity of making it of wood, in place of straw, which for the reasons before given, I should have preferred.

It consists of two distinct hexagons, one placed above the other. The under is formed of six panes of half-inch deal, each measuring ten inches in width, and eight in depth, and covered with a thin board at top. This forms a box that will contain two pecks measure of corn, and which I consider as sufficient for the largest swarm. This is intended for the breeding as well as winter habitation of the bees. The upper is of the same dimensions and form as the under at bottom, but in order to give it a conical shape, for the more conveniently fixing thereon a coat of straw, the panes at top are only five inches wide, which is also covered by a piece of board. The upper box has a moulding fixed to its under part, which projects about a quarter of an inch, and so exactly embraces the upper part of the lower box, as to join these two firmly together. In the deal which forms the top of the lower box, are cut four oval holes, each one inch wide, and two inches long, through which the bees pass into the upper. This communication when not wanted, is shut by a nail in its centre. The small pane of glass in the top of the upper box, admits of seeing the progress the bees have made without separating it from the lower one.

When the swarm is first put into the lower box, the communication is not made with the upper until the bees have completely filled the lower with combs. The communication is then to be opened, when the bees will ascend, and if the season is favorable, and the swarm numerous, they will fill it also, but not until they have completely stocked the lower. By removing the straw covering and looking through the glass in the upper box, it may be seen what honey has been collected. Should a part or the whole of it be wanted, it will only be necessary carefully to separate the upper from the lower box, and shut the board of communication. The upper box is then to be removed to some distance, and the bees contained in it, driven off, on which they will immediately join their companions in the lower. So soon as the honey is taken from the box, it can be replaced, and if early in the season, the communication opened for more honey; but of late, it must be kept shut until the hive has swarmed next summer. If honey-comb early next season, is preferred to a swarm, then the communication must be opened about the beginning of June.

All the honey procured in this way is remarkable for its purity, none of the cells having been ever polluted by the hatching of young bees.

The greatest advantages, however, from this method are the early and large swarms—the consequence of not killing the bees.

Conclusion.—I shall conclude this essay, with some curious facts in the history of the bee, which presented themselves to my notice during the management of this singular insect.

1st, I have frequently observed, that during swarming, the twig or branch which supported the swarm, weighing from 5 to 6 lb. or 30,000 bees, had its surface completely covered with the first 300 or 400 that alighted upon it, the remainder of the swarm having their whole weight supported by that small number, which, in any other situation, must have torn them to atoms.

2dly. That light is not necessary to the labour of bees, or if it is, it must be in a degree incomprehensible to us. The passage to the abode of the humble bee is often a zigzag, several yards in length, through which it appears impossible for any light to pass.

3dly, Bees are entirely directed to their food by smell, as appears from the following experiment. I placed in a tea-kettle a cloth, through which I had strained some honey, and after fixing the lid, I put it on the ground, about 200 yards to windward of some hives. I was soon after much amused by seeing a number of bees following the different windings of the scented breeze, until they reached the spout of the kettle, which they immediately entered.

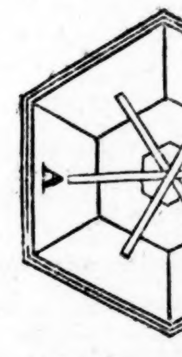
4thly, Killing the drones by the working bees, when the breeding is at an end, is performed in a singular way, and done by one bee in general. It almost uniformly fixes on the drone, at the insertion of the left wing, when it tears with its fangs the muscle which moves the wing, so that when thrown from the the stand of the hive, it cannot again rise, and is usually killed by the cold of the following night. No stinging or other violence is ever used; and although the drone is four times the size of his executioner, no attempt at retaliation is ever offered.

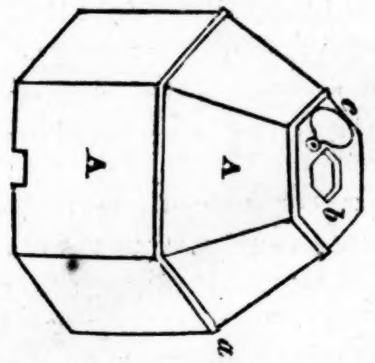
EXPLANAMION OF THE ENGRAVINGS.

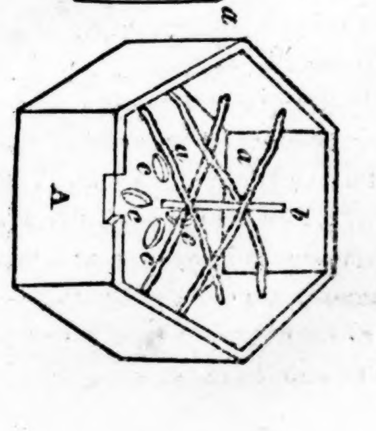
Fig. 1, A A, the upper and lower boxes joined, forming the complete hive; *a*, the moulding of the upper box, which fixes it to the lower; *b*, the small pane of glass in the upper box; *c*, its wooden shutter, which moves on a nail.

Fig. 2, A, the lower box inverted; *a a*, the two rows of cross borizontal sticks, for supporting the combs; *b*, the perpendicular stick for the ascent of the bess: *c c c c*, the holes of communication.

Fig. 3, A, the upper box inverted; *a a a*, the single row of cross sticks, for supporting the combs.







THE PLOUGH BOY.

ALBANY : SATURDAY, MARCH 25, 1820.

It gives us pleasure to observe with what a laudable spirit of zeal and industry the Agricultural Society of the city of New-York, have entered upon their labours. As one evidence of this, they have not confined their premiums, to be awarded in October next, to the county alone — but have offered upwards of forty to be competed for throughout the state. This measure is calculated to awaken the spirit of emulation and enterprise from Long-Island to the Lakes, and will, we trust, produce the most salutary effects. The expose of the Society, on this subject, shall appear in this paper.

Another important measure of that Society, is the recent publication of a very interesting Memoir on the subject of the wheat and flour of the state of New-York, by BENJAMIN U. COLES, Esq. In this memoir, the author has discussed with ability, and no small share of labour and research, the following important questions, viz.

1st. What are the causes which have produced the inferior quality of New-York wheat and flour, as compared with those of some other states ?

2d. What are the most effectual means by which their quality may be improved ?

We shall present our readers with this valuable document in due season, or at least the most important features of it. It is accompanied by a plate, shewing the rise and progress of the disorder in wheat, called the rust, which we have put into the hands of the engravers, and as soon as the engraving be finished, we shall commence the publication of the memoir.

SCIENTIFIC NOTICE.

A system of geology for the northern states is now in press, under the patronage and direction of the Troy Lyceum of Natural History, which will be completed in about six weeks. It will embrace a very interesting record of geological facts, collated under the strata to which they respectively belong. It will appear in a familiar dress ; with practical references to Agriculture, to the situation of all useful minerals, and to other purposes of life.

The district of country more particularly referred to, is embraced between the Susquehanna river and the Atlantic at the eastern coast of Massachusetts. The arrangement of strata, is founded upon a minute inspection of them across the most interesting ranges ; through about seven degrees of longitude, and from fifty to one hundred and fifty miles in breadth.

A grammar of geology is prefixed for the convenience of learners, and two copper plates. It will appear in a neat pocket volume, 12 mo.— price, about one dollar fifty cents. As the design of the work is to facilitate the study of an interesting branch of Natural History, the price is to be reduced as low as the labor and materials can be afforded.

CALCINED PLASTER OF PARIS.

We have not time to abridge the contents of the following letter, from a respectable gentleman of the city of Troy ; nor to make any further remark, than barely to mention, that if the calcination of Plaister of Paris will cause it to produce the same effect on the sea board, or salt water vicinity, that it does generally in the interior, without calcination, the discovery is of no small consequence. We recommend to our readers on the ocean-border to try the experiment.

TROY, *March* 20, 1820.

MR. SOUTHWICK,

Since I had the pleasure of spending an evening with you at Mr. ****** ******, in this city, I wrote my brother, (Mr. ****** ******,) who resides at Turin, Lewis county ; concerning the effect of plaster, at Belle Ville, New-Jersey, and particularly the *Calcined plaister* ; (you will doubtless recollect our conversation on that subject.) A few days since I received a communication from him, which I shall herewith forward you, *with a request*, that should you deem it worth notice in your useful *Plough Boy*, that neither his name nor mine should be made use of. He claims no credit from the discovery, and the experiment was scarce sufficient to warrant any comments. However, as you solicited what information I could collect from him, agreeable to promise you have it. I would further remark, that his farm was situated on the Passaic river, between Newark and Belleville, 8 miles west from the city of New-York, where plaster was never considered to take effect.

" Respecting your enquiry as to the result of my experiment with plaster, when I resided on my farm in Jersey, I have to inform you, that in the early part of May, 1815, I had about half a bushel of calcined plaster, which I put on a large quarter of an acre of young clover, that I had stocked down the season before. To ascertain more particularly its effect I left in three different places a land of 10 or 12 paces in width unplastered. The result was, that where I plastered, I had a very abundant crop, whereas the other part of the lot was not worth cutting, (the season was unfavourable for grass.) I was so much pleased with this my first attempt with plaster, that I purchased a ton the next season, *in its uncalcined state* which I disposed of in different parts of my farm. I plastered five acres of the lot on which I had first made the experiment, leaving about an acre to ascertain the difference, but to my great disappointment, I could not discover the smallest benefit resulting therefrom : nevertheless that part on which I had sown the *calcined* plaster the season before, had a heavy crop of grass thereon, (though not quite so abundant as the season before.) I tried it the same season on my corn, (the soil perhaps was better adapted, being dry and gravelly,) and with some effect, as I left several rows unplastered, and there was certainly one-third difference. I had a little of the *calcined* plaster left, sufficient for 3 or 4 rows, which I applied, and the difference was astonishing, it being so far superior to any other part of the field. As I left Jersey for this quarter, the season following, I had not an opportunity of testing the experiment further, but from what I did, (which was mere accident,) I have no doubt but the calcined plaster will take effect *particularly on a sea-board*, when plaster in its natural state would prove a nullity.

" I have thus far given you my opinion of the difference between the two kinds of plaster, predicated on the experiment I made in Jersey.— How far I may be correct farther experiment will decide ; which I am determined to ascertain should I live another season.

" Should Mr. Southwick think these circumstances worth inserting in his useful agricultural paper, he may do it, as an accidental discovery of a gentleman late from that part of New-Jersey, now residing at Turin, Lewis county ; as it would have the appearance of ostentation and vanity to give my name, as there is no merit attached to the discovery, it being altogether accidental. When I confirm my opinion, by farther experiment, he may rest assured I should be proud in adding my mite to aid his present laudable and useful pursuit. I have long intended to direct his paper sent to me, and shall very soon."

You have, sir, a verbatim transcript from my brother's letter, which I submit without any further comment, except that this calcined plaster had been taken from an old oven that had been used for making red lead, and had undergone a number of severe heats.

Respectfully yours, * *****

ERRATA.

In printing the Address of Mr. THOMAS, in our 40th number, the following errors occured :— page 315, 2d column line 3 from the bottom, for *varieties*, read *variation*. Line 1 and 2 for *stand and* read *standard*. Page 316, 1st column, line 5 from the top, for *I am*, read *you must be*. Line 13, for *heads*, read *hands*. 2d column, line 30 from the top, read " *of those who assert this doctrine*." Line 38, for *they feed*, read *it feeds*.

Weekly Summary.

The commissioners appointed at the last session of the legislature, to report, during the present session, on the most feasible and practicable plan of improving the upper end of the navigation of the Hudson, have made their report.— Two different objects are noticed in this document : the first, and by far the most interesting, being to open a navigation sufficient for enabling merchant ships to reach this place, and to improve the sloop navigation to Troy : the second, being merely to deepen and straiten the channel from Troy downwards, sufficient for the easy navigation of the common river vessels. Mr. H. Butler, a gentleman of practical knowledge on this latter plan, estimates its expense at a little more than 100,000 dollars. The commissioners, however, appear to be decidedly in favour of the former plan ; and with this view, Mr. Genet, one of their number, has accurately examined the nature of the ground, its sub soil, &c. for the purpose of ascertaining the probable expense of cutting a canal, sufficiently wide and deep for sea vessels, from Greenbush, opposite this city, for about 13 miles down the river, so as to enter it below the lower overslaugh ; and the result of his examinations and computations is, that such a canal may be completed for about 728,000 dollars. The expense of deepening the river

channel, from this place to Troy, is estimated, by Mr. Butler, at about 47,000; so that it is probable the whole expenditure to be incurred on this plan would be about 775,000 dollars.

The tax levied on the steam-boats navigating the Hudson, (being a dollar on each passenger) is most probably to be repealed during the present session of the legislature. It has also passed, by an almost unanimous vote, a bill to authorise Messrs. Murray, Fairman & Co. of Philadelphia, to dispose of tickets within this state, in a lottery, granted by the legislature of Pennsylvania, for the disposal of the stock of the American edition of Rees' New Cyclopedia, a work highly valued for the matter it contains.

From accounts from various quarters, particularly on and near the sea board, it appears that fruit trees, as well as those of the forest, have sustained great damage from the overloading of their branches with ice, in the late storm.—At New-Haven, a ship and brig were upset at the wharf, owing to their rigging having become too heavily incrusted with ice.—From Attleborough, Mass. an account is stated of a twig, about as thick as a pipe stem, only 7 inches long, with two branches, the ice on which afforded a pint of water.

FOREIGN.

On the 13th ult. the duke de Berri, the heir apparent to the crown of France, was assassinated, on leaving the opera-house, in Paris. He died the next morning at 6, in the arms of the king. The assassin was secured, who declared that the murder had been long intended—that he had meditated the death of the king at his *rentree* at Calais, in 1814, but was disappointed in his design; but that, as nature must soon close the earthly career of the reigning monarch, he was content with having destroyed him who was to be his successor.—It would seem that the object of this assassination was political—to end the Bourbon dynasty.

On the 16th ult. the late king of England was solemnly interred. A new parliament was to be immediately elected, for which great preparations were making. It appears, also, that one of the first prominent acts of his successor, has been a request to his ministers to have his consort brought to trial, on the charges alleged against her, of conjugal infidelity. On this charge a separation formerly took place between the parties, and she has for several years past resided abroad, with an allowance of £30,000 a year. It seems, however, that his ministers, fearing, that if a trial should take place, the tragedies of Anne Boleyn and Catharine Howard, (wives of Henry 8th) would again be acted on the scaffold, and conscious that the more refined feelings of the English of the present day would not accord with scenes of such brutality, have declined any agency in the affair, and have accordingly sent in their resignations. But it appears that the king, finding his ministry and the nation opposed to a procedure so sanguinary, abandoned it, but has declared that she never shall be crowned with him. She was expected in England, and the opposition were making preparations to give her a splendid reception.

The duke of Wellington is stated to have lost the whole of his immense fortune at the gaming table. One of the winners was the duke of Clarence, the other lord Yarmouth.

An Irish paper states that Mr. Phillips, the celebrated Irish barrister, was about to enter holy orders.

From Spain the latest accounts are somewhat various in regard to the insurrection there. From the whole, however, there is reason to believe that it is formidable and appalling to the government of Ferdinand—that the object is to restore the Cortes and the constitution—that Ferdinand has applied to France for assistance, but that aid was probably not to be expected from that quarter, as it was well known that the French were mostly in favour of the Cortes and the constitution. As it is the interest of the British to have South America independent, it is supposed that the Spanish monarch can derive no aid from that quarter. The revolution in Spain is, at all events, considered as having secured the independence of South America.

In regard to our own affairs with Spain, it appears, that although a minister has been appointed from the Spanish court for this country, there does not seem to be any probable intention of expediting his arrival here until it is first understood what course our government intends to take.—In the mean time it appears that our minister at Madrid intended to leave that place shortly, unless otherwise directed from Washington.

A gentleman at St. Thomas, in a letter, of the 26th ult. to his friend in Baltimore, says, "it is credibly reported here, that the independents have gained a decisive battle over the royalists, in Venezuela, and are by this time in possession of Caraccas. Morillo had been so much reduced as to order up the trifling reinforcement of 45 men from the garrison of Puerto Cavello."

At Lisbon the weather has been so severe that 85 fishermen and 3 centinels were frozen to death in one night. The ice froze 3 inches thick in one night; a circumstance unprecedented in that place.

From Morocco, we learn that in the latter part of December, the viceroy of Fez was attacked by the Moors, at the door of his own palace, where he was killed, and torn to pieces. Also that the plague had subsided.

The greatest water-fall in Europe has lately been discovered on the river Lattin, in Lapland. It is half a mile wide, and 400 feet perpendicular.

Considerable disturbance appears to be prevalent in several parts of Ireland. In a riotous assemblage in Monokan, the inspector of a jail was severely wounded, and the turnkey killed. At a quarter assembly of the corporation of Dublin, on the 21st January, an affecting picture of the distressed state of the country, but particularly of the manufacturing part of that city, is drawn, and attributed to the absence of the nobility and gentry, and the want of a resident legislature. Attempts were accordingly to be made to petition parliament for a repeal of the union, as none of the advantages promised at the time of effecting that measure had been realized.

A late English paper remarks, "with our improved manufacturing machinery we can make more clothing in 6 months, than all our customers, foreign and domestic, are disposed to buy, or rather have the means of purchasing, in a year."

Dreadful inundation in Holland.—**From Guilderland,** extracts of letters from 27th to 29th January, represent that part of Holland to be completely inundated. The sea broke through the dykes, and the waters and ice rushed in in dreadful torrents. The inhabitants, in some of the villages of the lower grounds, took refuge first in the second stories of the houses, but were soon obliged to leave these, and take to the garrets; from thence they were driven to the roofs of the buildings, and many at last were washed away—many lives lost, particularly of children. A great many cattle were drowned, and for those saved no food was to be had. The labours of the husbandman were destroyed, and the fields and meadows were, in many places, covered with great depths of sand. "The lower part of Guilderland, the lower Batavia, (says the account) otherwise a beautiful part of the country, is one universal ruin." Cannons were heard firing from various parts, and the ringing of bells as signals of distress. Many, it was thought, would perish from want, unless sufficient aid was afforded them from other parts of the country not afflicted with this awful calamity; and for affording this aid, subscriptions were opened, to which the king had subscribed £1,000, for the immediate wants of the sufferers, and had in person repaired to the parts where farther dangers were apprehended. The city of Rotterdam it appears was safe.

A letter from Amsterdam, received at Boston, speaking of the distress occasioned by the waters in many parts of Brabant and Germany, says—"Brussels has lost some of her finest buildings, and the handsomest gate of the city is carried away—hundreds of families have retired to the third and fourth stories, and starved for want of food. The weather is now mild, and the ice appears nearly at an end." An account from Brussels, of January 31, says, the king "has granted 100,000 florins for the relief of the sufferers by the inundation—that the last accounts from the northern provinces contain only distressing details of the disasters caused by the inundations." It was feared that many had perished, as several dead bodies had been seen floating about Nimeguen.—"The village of Persingen has entirely vanished, except two houses."

METEOROLOGICAL JOURNAL, FOR THE MONTH OF FEBRUARY, 1820,

KEPT AT THE CITY ACADEMY IN ALBANY.

days.	Thermom'r 7, a m	Thermom'r 2, p m	Thermom'r 9, p m	Barometer. 7, a m	Barometer. 2, p m	Barometer. 9, p m	Winds. morn'g	Winds. aftern.	Weather. morn'g	Weather. aftern.	Observations.
1	0	10	7	29 90	30 01	30 08	W	W	Clear	Clear	
2	-5	7	8	30 10	29 92	29 75	NW	W	Cloudy	Cloudy	Snow at night.
3	14	25	21	29.40	29.20	29 41	do	NW	do	do	
4	19	26	13	29 62	29.73	30.03	W	W	do	do	
5	-5	23	19	30.30	30.27	30.10	NW	NW	Clear	Clear	High . W. during night.
6	32	44	32	29.70	29 67	29.73	S E	S	do	do	
7	31	35	32	29.73	29.67	29.70	S	N	Cloudy	Cloudy	Snow during day.
8	26	41	27	29 82	29 93	29.91	S E	S	Clear	Clear	
9	19	21	16	29 72	29 72	29.90	NW	N	Cloudy	Cloudy	Snow during day.
10	14	28	23	29 91	29.90	29.75	N	S	do	do	Snow at night.
11	21	42	25	29.63	29 75	29.75	NW	N	Clear	Cloudy	
12	15	42	34	29 72	29.65	29.60	N	S	Clear	Clear	
13	38	50	34	29.40	29.41	29 57	S	W	do	do	
14	24	45	39	29.65	29.70	29.60	S W	S W	do	do	
15	39	50	39	29 40	9.35	29 62	S	S	do	do	
16	31	39	36	29.70	29.70	29.57	S W	N	Cloudy	Cloudy	Slight rain, P. M.
17	14	13	39	29.25	29.20	29 25	S	NE	do	do	Rain during day.
18	34	36	28	9.37	29.45	29.75	W	W	do	do	
19	17	37	24	30 07	30.11	29 95	N	N	Clear	Clear	
20	30	39	30	29.62	29.47	29.40	S E	S	Cloudy	Cloudy	Snow to 8 A. M.
21	27	34	24	29 40	29.50	29.63	W	W	do	do	
22	22	53	34	29.69	29 57	29.51	do	S	Clear	Clear	
23	35	56	35	29.40	29 45	29 45	S	W	do	do	Rain at night.
24	36	36	37	29.21	29.35	29.63	do	S	Cloudy	Cloudy	Rain from 11 P. M. to 3 P. M.
25	0	39	36	29 80	29 80	29.80	N	S	do	do	Drizzling rain.
26	36	40	13	29.75	29.60	29 5	S E	S	do	do	Do.
27	43	48	35	29 40	29 41	29.40	W	S W	do	do	
28	28	40	30	29.50	29 50	29.53	do	W	Clear	Cloud	
29	21	36	26	29.53	29.45	9 45	N W	W	Clear	Clear	

MARRIED,

On Sunday evening last, by the Rev. Hooper Cumming, Mr. JESSE P. MITCHELL, to Miss CAROLINE HOFFMAN, both of this city.

On the 15th instant, by William Dickson, Esq. Mr. WILLIAM REILY to Miss MARGARET SISCO, both of Bethlehem.

PRESENT PRICES OF COUNTRY PRODUCE IN THIS MARKET.

FLOUR AND GRAIN.—Superfine flour $6—Rye flour $2 75 per bbl.—Indian meal $1 50 cwt.—Buckwheat flour $1 25 to $1 75 cwt.—Wheat 87 cents to $1 6 bush.—Rye 54—Corn 44—Oats 31—Barley 75—Peas 50 to 62 1-2 per bush.

Beef, stall fed $6 cwt.—common beef $3 to $4 50—Pork $6 to 6 50—Mutton 6 to 7 cents per lb.—Ham 7 to 10 per lb.

Hay, average, 37 1-2 cents per cwt.

Butter 10 to 12 cents per lb.—Cheese, good, $6 per cwt.—Cider $ 2 to 2 50 p. bbl.—Potatoes 25 cents per bushel.—Turnips, ruta baga, 37 1-2 cent—white, 25 cents.

LUMBER.—Pine plank 14 cents—white p. do. 18—do. boards, good, $2 100 ft. com. $1 do.—Shingles, good, $1 50 per bundle.

Albany, March 24, 1820.

PRICE CURRENT.

Corrected Weekly, from the New-York General Price Current and Public Sales Report.

	Per	From D.	C.	To D.	C.	Remarks
ASHES, Pot	Ton	115		116	25	Dull.
—— Pearl		117				"
BEEF, Mess	bbl	10				
—— Prime		8		8	25	
—— Cargo		6	25			
BUTTER, first quality	lb		15		16	
—— for exportation			9		11	
CANDLES, mould			18		19	
—— Dipped			17			
—— Sperm.			44		45	
—— Wax			60			
CHEESE, American			6		7	
CHOCOLATE, New-York			18		25	
—— Boston, No. 1.			18		25	
—— Albany			20		25	
DOMESTIC GOODS,						
—— White shirting	yard		14		18	
—— Brown do			12		13	
—— 3-4 checks			16		18	
—— 7-8 do			21		22	
—— 4-4 do			24		27	
—— Stripes			16		18	
—— Plaids			16		20	
—— Bed-ticks			23		36	
—— Chambrays			14		15	
FEATHERS	lb		56		68	
FISH, Dry Cod	cwt	2	50	2	87	
—— scale		2				
—— Pickled Cod	bbl	3	50	4		
—— scale		2				
—— Salmon		15				
—— Fall mackrel No.1		7	25	8		
—— —— No.2		5	50	6		
—— —— No. 3		4	50	5		
—— Southern shad No. 1		5	50	6		
—— Connecticut mess shad		10	50	11		
—— Herrings		2	50	3		
FLAX	lb		16		18	
FLAX-SEED, clean	cask	13		13	50	
—— rough		12		13		
FLOUR & GRAIN						
—— New-York superfine	lb.	5		5	12	
—— Philadelphia		5	75	6		
—— Baltimore		5	75	6		
—— Richmond		5	50			
—— Middlings, fine		4				
—— Rye flour		3				
—— Indian meal		3		3	25	
—— —— in hogsheads	800	18		19		
—— Wheat, North River	bus.		87	1		
—— —— Southern, new		1				
—— Barley			65		68	
—— Oats			32		34	
GLASS, Amer. 7 by 9	box	9				
—— - 8 10		10				
—— - 10 12		12		12	50	
GLUE	lb		12		13	
GUN-POWDER, Amer.	25lb	5		6		
—— - Cannon		6		6	50	
HAMS, Virginia	lb		10		12	
— North River			9		11	
HEMP, Water rot	Ton					None.
—— Dew rot		150				Scarce.
HOGSLARD	lb		11		12	
HONEY			15		16	
HOPS 1st and 2d sort			6		8	
IRON, American	Ton	85		90		
LUMBER, Boards, oak	Mft	18				
—— North River pine		16		17		
—— Yellow pine		18		20		
—— Albany pineb'ds	pie.		18			
—— Scantling, pine	Mft	14		15		
—— —— oak		25				
—— Oak timber	sd.ft		20		25	
—— Shingles, cypress	1000	4				
—— —— pine		3		3	50	
—— Staves, pipe		55				
—— — hhd		44				
—— — bbl		28				
—— — R O hhd		26				
—— Hhd heading		50				
—— — hoops		25		30		
OIL, Linseed	gal	1				
PLAISTER of PARIS	Ton	4	50			
PORK, Cargo	bbl	9	50	10		
—— Prime		11	50	12		
—— Mess		13	50	14		
SOAP White	lb		13		15	
—— Brown			9		11	
WAX, Bees, white			55		60	
—— —— yellow			31		32	

New-York, March 17, 1820.

POETRY.

FOR THE PLOUGH BOY.

THE INDIAN WARRIOR'S GRAVE.

Tread light on that turf which yon green sod encloses,
Where on the blue waters the wild willows wave,
For there, pale and breathless, a warrior reposes,
The pride of his country, the dread of the brave.
Ye spirits, who high on the red clouds are flying,
When the battle roars loud, and the death shafts are flying,
Say, where was your power when your chieftain was dying,
When bleeding and cold he was laid in the grave?

At noon, when the mountains the hunter descending,
Trod alone the wood-path in pursuit of the deer,
Unconscious that woe on his tread was impending,
He thought not of danger, nor harbour'd a fear.
Thro' the low winding valley afar he had bounded,
Ere the dark robe of night the horizon surrounded,
When sudden, a shout through the forest resounded,
And peal'd like the death-note of war in his ear.

He listen'd—it ceas'd—and he stood, proudly daring—
When again rang the wood with the same deadly yell;
The warrior his bow for defence was preparing,
When an arrow unseen pierc'd his breast, and he fell:
For conceal'd in the gloom which the night was bestowing,
On the glade where the lake's rolling waters were flowing,
A traitor, revenge in whose bosom was glowing,
Had directed an arrow too faithful and well.

Ah! how sad was that hour when his life blood was starting,
And his pale, ghastly visage was crimson'd with gore;
How glared his dim eye as his breath was departing,
And a deep groan announc'd that his last pang was o'er.
Around him the dank dews of midnight were falling,
The grim, prowling wolves their companions were calling,
And the deep, moaning outcry so wild and appalling,
Was the death-song which told that the chief was no more.

Ah! long shall the maids of his nation be mourning,
And many a tear from the warrior shall flow;
For never again shall they see him returning
From the chase of the deer, or the death of his foe.
Dark and deep is the grave where his bones are decaying,
And oft, when its grass in the night breeze is playing,
A sound of dread import the wanderer dismaying,
Is heard on the spot where the warrior lies low. ***.

Dissolution.

THE partnership heretofore existing under the firm of WARNER DANIELS & CO. was dissolved on the first day of November last, by mutual consent. All persons having demands against the firm are requested to present them for payment: and those who are indebted to said firm, to call and settle the same with Warner Daniels, who is authorised to settle all business relating to the said partnership.

WARNER DANIELS continues the casting business, as usual, at the Eagle Air-Furnace, No. 84, Beaver-street, where all orders in his line will be thankfully received and punctually attended to.

WARNER DANIELS,
THOMAS GOULD.

Albany, March 17, 1820.

About the 9th inst. the house of Comer Philips, near Wilkesbarre, Penn. was destroyed by fire, together with all its contents. The son of Mr. P. about 12 years of age, perished in the flames; and a Mr. Taylor, in attempting to rescue the boy, was also so badly burnt that he has since died.

On the 25th ult. William Cotterill and his two sons, William and John, were hung at Hagerstown, Md. for the murder of a person of the name of Adams. The sons acknowleged their guilt, but protested that their father was innocent. The father also protested his innocence, but declared he was prepared to die.

Sale of Land for Taxes.

State of New-York—Comptroller's Office.

PUBLIC Notice is hereby given, that lists of certain lands liable to be sold for taxes, have been forwarded to the several counties in this state, in order to be deposited in the several county treasurers' and town clerks' offices, respectively, for the information of all persons concerned; and that the said lists may be examined at either of the said offices, at all reasonable hours: And notice is hereby also given, that on *Thursday, the seventh day of October next*, at ten o'clock in the forenoon, at the capitol, in the city of Albany, and on the next succeeding days, I will sell at public auction, to the highest bidder, so much of each lot, piece or parcel of land mentioned and described in the said lists, as will be necessary to pay all taxes, interest and charges now due, or that may grow and may be due thereon at the time of sale.

The conditions of sale will be, that the purchasers within forty-eight hours after the sale, pay the purchase moneys and receive certificates of their purchases; and that after the expiration of two years from the date of their certificates, they receive conveyances for the lands purchased by them respectively, unless the owners, or those claiming to be such, of the lands so purchased, shall, previous to the expiration of the said two years, pay to the comptroller, for the use of the said purchasers, their heirs and assigns, the amount of the purchase moneys, with interest, at the rate of twenty per centum per annum.—The lands sold to be subject to all claims of the state thereon. And in case any land to be purchased at the said sale and that may be conveyed in pursuance thereof, shall at the time of conveyance be in the actual possession and occupancy of any person or persons, the title of the purchaser shall then and in that case be subject to the stipulations and provisions of the fifth section of the act, entitled "an act to repeal in part the act, entitled "an act providing more effectually to ascertain and determine the true value of real estates within this state, and for other purposes," and further to amend the act for the assessment and collection of taxes" passed April 13, 1819.

ARCH'D. M'INTYRE, Comptroller.

Albany, May 27th, 1819.

☞ Persons who may have made payments into the treasury for taxes, and omitted to have their receipts presented at the comptroller's office to have them entered and countersigned as required by law, are advised to present them in order to be so entered and countersigned before the day of sale; or that in case of failing to do so, their lands will be sold, and they thereafter be deprived of the benefit of all such payments.

Payments for taxes cannot be received on the days of sale, nor for two days prior to the sale.

☞ The above mentioned sale is postponed untill Tuesday, the eighth day of February next, at ten o'clock in the forenoon.

ARCH'D M'INTYRE, *Comptroller.*

Albany, October 2, 1819.

☞ Agreeably to an act of the legislature, passed this day, the above sale is further postponed until the first Tuesday of February, in the year 1821, to be then held at the same place and hour. ARCHD. M'INTYRE, *Comptr.*

Albany, February 4, 1820.

ALBANY: PRINTED FOR THE EDITOR,

BY JOHN O. COLE.

☞ COMMUNICATIONS, SUBSCRIPTIONS, and ADVERTISEMENTS, for this paper, and PRINTING JOBS, of every description, which will be neatly executed, at fair prices, received at the Post Office. All letters from abroad, directed to the Postmaster, Albany, will be duly attended to.

TERMS.

THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.